

# STN- Structure Search

12/8/08

10/786,924

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L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1012001 CAPLUS

DOCUMENT NUMBER: 143:465835

TITLE: Tumour-inhibiting platinum(II) complexes with aminoalcohol ligands: biologically important transformations studied by micellar electrokinetic chromatography, nuclear magnetic resonance spectroscopy and mass spectrometry

AUTHOR(S): Schluga, Petra; Hartinger, Christian G.; Galanski, Markus; Meelich, Kristof; Timerbaev, Andrei R.; Keppler, Bernhard K.

CORPORATE SOURCE: Institute of Inorganic Chemistry - Bioinorganic, Environmental and Radiochemistry, University of Vienna, Vienna, A-1090, Austria

SOURCE: Analyst (Cambridge, United Kingdom) (2005), 130(10), 1383-1389

CODEN: ANALAO; ISSN: 0003-2654

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

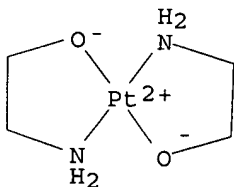
AB (SP-4-2)-Bis[(R)-(-)-2-aminobutanol-κN]dichloroplatinum(II) and (SP-4-2)-bis[(R)-(-)-2-aminobutanolato-κ2N,O]platinum(II) are promising cytotoxic agents exhibiting a strongly pH-dependent rate of reaction with the DNA-modeling nucleotide GMP. This potential mode-of-action binding, directly correlating with cytotoxicity, is influenced by the intramol. chelation of bifunctional aminoalc. ligands which was examined by means of micellar electrokinetic chromatog. (MEKC) and NMR. While NMR clearly proves the existence of equilibrium between the ring-opened and ring-closed species, no such transformation was observed under MEKC conditions. In a kinetic study performed by MEKC, the half-lives of GMP bound to the platinum complexes were determined and compared to the kinetic data acquired by capillary zone electrophoresis. An appreciable increase in binding in the presence of sodium dodecyl sulfate (SDS) micelles was explained in terms of activation of (SP-4-2)-bis[(R)-(-)-2-aminobutanol-κN]dichloroplatinum(ii). This apparently takes place due to the shifting of the equilibrium towards the ring-opened species, induced by adduct formation between SDS and the platinum complex that was confirmed by electrospray ionization mass spectrometry.

IT 53195-42-9 500716-84-7

RL: MOA (Modifier or additive use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(intramol. chelation of antitumor platinum complexes with aminoalc. ligands and GMP binding)

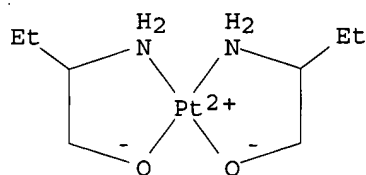
RN 53195-42-9 CAPLUS

CN Platinum, bis[2-(amino-κN)ethanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)



RN 500716-84-7 CAPLUS

CN Platinum, bis[(2R)-2-(amino-κN)-1-butanolato-κO]-, (SP-4-2)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:594578 CAPLUS

DOCUMENT NUMBER: 141:235891

TITLE: Synthesis, crystal structure and pH dependent cytotoxicity of (SP-4-2)-bis(2-aminoethanolato-κ<sup>2</sup>N,O)platinum(II) - a representative of novel pH sensitive anticancer platinum complexes

AUTHOR(S): Galanski, Markus; Baumgartner, Christian; Meelich, Kristof; Arion, Vladimir B.; Fremuth, Madeleine; Jakupec, Michael A.; Schluga, Petra; Hartinger, Christian G.; von Keyserlingk, Nikolai Graf; Keppler, Bernhard K.

CORPORATE SOURCE: Institute of Inorganic Chemistry, University of Vienna, Vienna, A-1090, Austria.

SOURCE: Inorganica Chimica Acta (2004) 357(11), 3237-3244  
CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Solid tumors are often hypoxic and consequently the pH in the tumoral tissue is decreasing with increasing tumor size (pH 5.5-7.4 in solid tumors vs. pH 7.4 in normal tissues). This marked difference in pH value is a problem for weak base organic drugs and could advantageously be used for the introduction of pH sensitive anticancer platinum drugs. Synthesis and structure determination of (SP-4-2)-bis(2-aminoethanolato-κ<sup>2</sup>N,O)platinum(II), its binding behavior to 5'-GMP and its cytotoxicity against cisplatin sensitive cell lines under standard pH screening conditions (pH 7.4) as well as in acidified cell culture medium (pH 6.0) mimicking the conditions in a number of solid tumors is presented. There is evidence that this concept in anticancer platinum therapy, namely administration of rather unreactive drugs and activation under acidic pH conditions, can be realized.

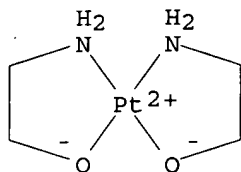
IT 752254-67-4

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(crystal structure; synthesis, crystal structure and pH dependent cytotoxicity of (SP-4-2)-bis(2-aminoethanolato-κ<sup>2</sup>N,O)platinum(II), representative of novel pH sensitive anticancer platinum complexes)

RN 752254-67-4 CAPLUS

CN Platinum, bis[2-(amino-κN)ethanolato-κO]-, dihydrate, (SP-4-2)- (9CI) (CA INDEX NAME)

● 2 H<sub>2</sub>O

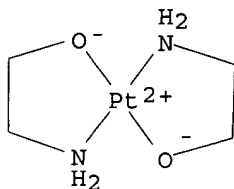
IT 53195-42-9P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis, crystal structure and pH dependent cytotoxicity of (SP-4-2)-bis(2-aminoethanolato-κ<sup>2</sup>N,O)platinum(II), representative of novel pH sensitive anticancer platinum complexes)

RN 53195-42-9 CAPLUS

CN Platinum, bis[2-(amino-κN)ethanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)



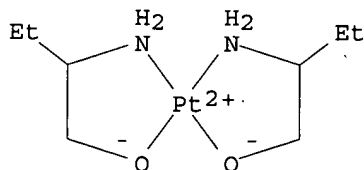
IT 500551-96-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synthesis, crystal structure and pH dependent cytotoxicity of (SP-4-2)-bis(2-aminoethanolato-κ<sup>2</sup>N,O)platinum(II), representative of novel pH sensitive anticancer platinum complexes)

RN 500551-96-2 CAPLUS

CN Platinum, bis[2-(amino-κN)-1-butanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)



REFERENCE COUNT:

27

THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:613655 CAPLUS

DOCUMENT NUMBER: 140:209330

TITLE: Bis(2-aminobutanol)dichloroplatinum(II) complexes and their singly and doubly ring-closed butanolato species - novel prodrugs for platinum-based antitumor

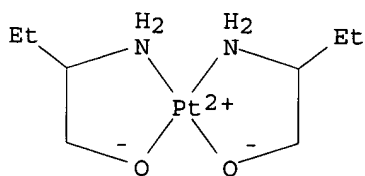
chemotherapy?  
 AUTHOR(S): Galanski, Markus; Baumgartner, Christian; Arion, Vladimir; Keppler, Bernhard K.  
 CORPORATE SOURCE: Institute of Inorganic Chemistry, Vienna University, Vienna, 1090, Austria  
 SOURCE: European Journal of Inorganic Chemistry (2003), (14), 2619-2625  
 CODEN: EJICFO; ISSN: 1434-1948  
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 140:209330

AB Cytotoxic hydroxyethyl-substituted (amine)platinum(II) and -(IV) complexes have recently attracted attention because of the ability of their hydroxyethyl groups to coordinate through the O atom to the Pt center during oxidation with H<sub>2</sub>O<sub>2</sub> or through intramol. ligand exchange reactions in dichloroplatinum(II) complexes. The last point in particular is of great interest, because the intramol. attack of the hydroxy group dramatically influences the mode of action of Pt(II) compds. However, there is also the chance to use such reactions specifically for the synthesis of novel anticancer Pt-based drugs for chemotherapy. The authors have therefore focused the authors' chemical program on the synthesis of dichloroplatinum(II) complexes that are in a position to form singly and, especially, doubly ring-closed alcoholato species and on study of their structures by x-ray crystallog. It was possible to determine the crystal structures of [Pt{(R)-(-)-HL}2Cl2], [Pt{(S)-(+)-HL}2Cl2], [Pt{(R)-(-)-HL}{(S)-(+)-HL}Cl2], [Pt{(S)-(+)-HL}{(S)-(+)-L}Cl], [Pt{(R)-(-)-L}2] and [Pt{(S)-(+)-L}2] (HL = 2-aminobutanol-κN, L = 2-aminobutanolato-κ2N,O). The results obtained may represent the 1st step towards novel prodrugs for Pt-based antitumor chemotherapy.

IT 660437-55-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and crystal structure of)

RN 660437-55-8 CAPLUS

CN Platinum, bis[(2S)-2-(amino-κN)-1-butanolato-κO]-, pentahydrate, (SP-4-2)- (9CI) (CA INDEX NAME)



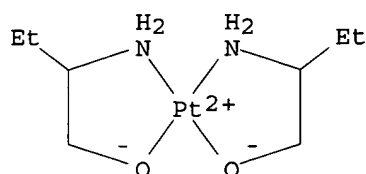
● 5 H<sub>2</sub>O

IT 661487-83-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

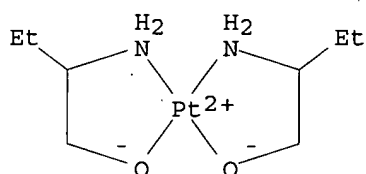
RN 661487-83-8 CAPLUS

CN Platinum, bis[2-(amino-κN)-1-butanolato-κO]- (9CI) (CA INDEX NAME)

10/786,924



IT 660437-54-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation, crystal structure and hydrogen bonding in)  
RN 660437-54-7 CAPLUS  
CN Platinum, bis[(2R)-2-(amino-κN)-1-butanolato-κO]-,  
pentahydrate, (SP-4-2)- (9CI) (CA INDEX NAME)



● 5 H<sub>2</sub>O

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

*on inventors*  
L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:173614 CAPLUS  
DOCUMENT NUMBER: 138:230987  
TITLE: Platinum(II) and platinum(IV) aminoalcohol complexes  
and their use as prophylactic and therapeutic agents  
INVENTOR(S): Keppler, Bernhard  
PATENT ASSIGNEE(S): Faustus Forschungs Cie. Translational Cancer Research  
GmbH, Germany  
SOURCE: PCT Int. Appl., 55 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018593	A2	20030306	WO 2002-EP9471	20020823
WO 2003018593	A3	20031127		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10141528	A1	20030313	DE 2001-10141528	20010824

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DE 10141528                      B4        20060810  
AU 2002350437                    A1        20030310                    AU 2002-350437                    20020823  
EP 1419166                        A2        20040519                    EP 2002-785109                    20020823

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2005026896                    A1        20050203                    US 2004-786924                    20040224  
PRIORITY APPLN. INFO.:                    DE 2001-10141528                    A    20010824  
WO 2002-EP9471                    W    20020823

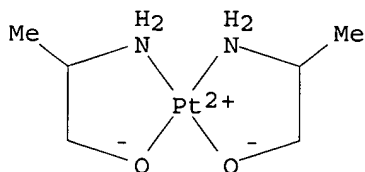
OTHER SOURCE(S):                    MARPAT 138:230987

AB Pt(II) and Pt(IV) aminoalc. complexes as well as physiol. acceptable addition salts are claimed for use as prophylactic and/or therapeutic agent (antitumor inhibiting agents) for treating diseases. For example, cis-Pt(HL)2I2 (HL = ethanolamine) was prepared from K2PtCl4, KI and HL and was converted to cis-Pt(HL)2Cl2 and subsequently to cis-PtL2 or cis-Pt(HL)2Cl4. Cis-Pt(HL)2Cl4 was converted to mer-Pt(HL)LCl3 and trans(Cl),cis(N,O)-PtL2Cl2. The antitumor activity of cis-PtL2 was tested.

IT 500551-98-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation and oxidation as antitumor agent)

RN 500551-98-4 CAPLUS

CN Platinum, bis[2-(amino-κN)-1-propanolato-κO]- (9CI) (CA INDEX NAME)



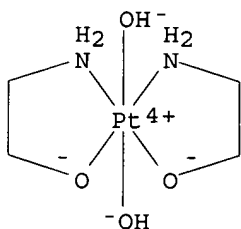
IT 500551-97-3P 500551-99-5P 500716-84-7P

500716-87-0P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation as antitumor agent)

RN 500551-97-3 CAPLUS

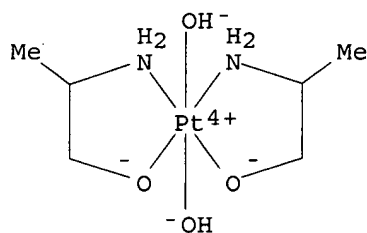
CN Platinum, bis[2-(amino-κN)ethanolato-κO]dihydroxy- (9CI) (CA INDEX NAME)



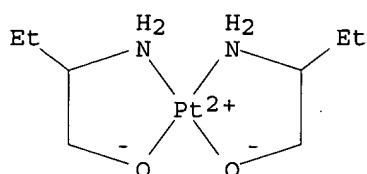
RN 500551-99-5 CAPLUS

CN Platinum, bis[2-(amino-κN)-1-propanolato-κO]dihydroxy- (9CI)  
(CA INDEX NAME)

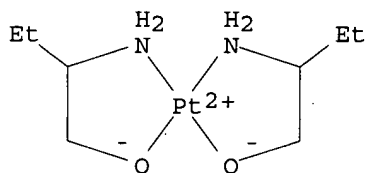
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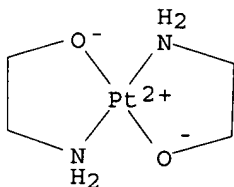
RN 500716-84-7 CAPLUS  
CN Platinum, bis[(2R)-2-(amino-κN)-1-butanolato-κO]-, (SP-4-2)-  
(9CI) (CA INDEX NAME)



RN 500716-87-0 CAPLUS  
CN Platinum, bis[(2S)-2-(amino-κN)-1-butanolato-κO]-, (SP-4-2)-  
(9CI) (CA INDEX NAME)

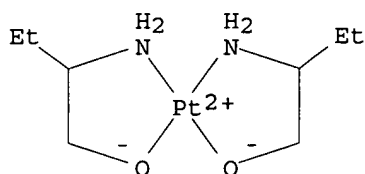


IT 53195-42-9P 500551-96-2P 500716-79-0P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation as antitumor agents)  
RN 53195-42-9 CAPLUS  
CN Platinum, bis[2-(amino-κN)ethanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)

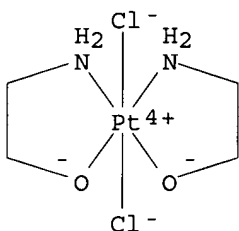


RN 500551-96-2 CAPLUS  
CN Platinum, bis[2-(amino-κN)-1-butanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)

10/786,924

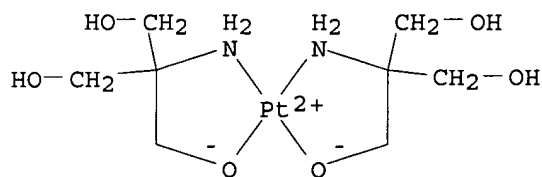


RN 500716-79-0 CAPLUS  
CN Platinum, bis[2-(amino-κN)ethanolato-κO]dichloro-, (OC-6-13)-  
(9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1997:5234 CAPLUS  
DOCUMENT NUMBER: 126:193431  
TITLE: Thermal conditions and kinetics of deposition of  
palladium and platinum on piezoelectric quartz during  
laser irradiation of metalorganic films  
AUTHOR(S): Seryanov, Yu. V.; Grigor'eva, E. M.; Bol'shinskova, T.  
A.; Shebaldova, A. D.  
CORPORATE SOURCE: Sarat. Gos. Univ., Saratov, Russia  
SOURCE: Fizika i Khimiya Obrabotki Materialov (1996), (5),  
58-63  
CODEN: FKOMAT; ISSN: 0015-3214  
PUBLISHER: Nauka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
AB The expts. were carried out allowing one to estimate on the basis of a  
recently proposed math. model the temperature of local laser surface heating,  
linear rate of metal deposition, limited rate of line scanning and the  
accuracy of microchips laser lithog. Microchips were prepared on the basis  
of thin films of Pd and Pt compns. with organic ligands on piezoelec. quartz.  
IT 187530-81-0  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(thermal conditions and kinetics of deposition of palladium and  
platinum on piezoelec. quartz during laser irradiation of metalorg. films)  
RN 187530-81-0 CAPLUS  
CN Platinum, bis[2-(amino-κN)-2-(hydroxymethyl)-1,3-propanediolato-  
κO]-, hydrate (2:5) (9CI) (CA INDEX NAME)





● 5/2 H<sub>2</sub>O

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:182046 CAPLUS

DOCUMENT NUMBER: 118:182046

TITLE: Synthesis and spectral studies of platinum(II) complexes with 2,3-disubstituted quinazolin-(3H)-4-ones

AUTHOR(S): Reddy, K. Laxma; Prabhakar, B.; Rao, P. Nageswara

CORPORATE SOURCE: Dep. Chem., Reg. Eng. Coll., Warangal, 506 004, India

SOURCE: Indian Journal of Chemistry, Section A: Inorganic, Bio-inorganic, Physical, Theoretical & Analytical Chemistry (1992), 31A(12), 970-1  
CODEN: ICACEC; ISSN: 0376-4710

DOCUMENT TYPE: Journal

LANGUAGE: English

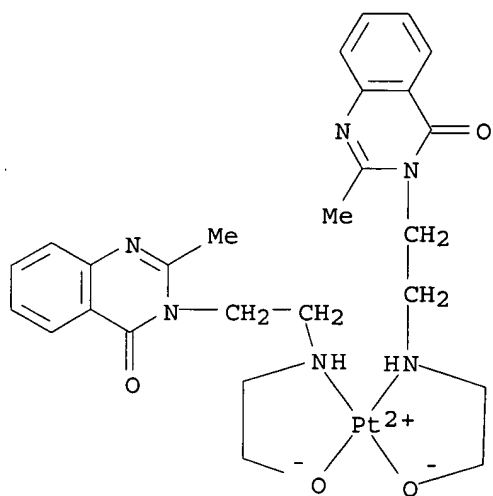
AB A number of Pt(II) complexes of bidentate O,O and O,N donors, 2-R-3-X-substituted quinazolin-(3H)-4-ones (R = Me/Ph; X = 2'-hydroxybenzalimino, carboxymethyl, N-(2'-hydroxyethyl)aminoethyl, furfuralimino, acetamino, uramino, and thiouramino) were synthesized and characterized. The reaction between PtCl<sub>2</sub> and the unineg. bidentate ligands (the last 4 listed X's) yield complexes of the type [Pt(L-L)<sub>2</sub>], whereas the neutral bidentate ligands give [Pt(L-L)<sub>2</sub>]Cl<sub>2</sub>. The complexes are assigned square-planar structures.

IT 146913-23-7P 146913-24-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and IR spectrum of)

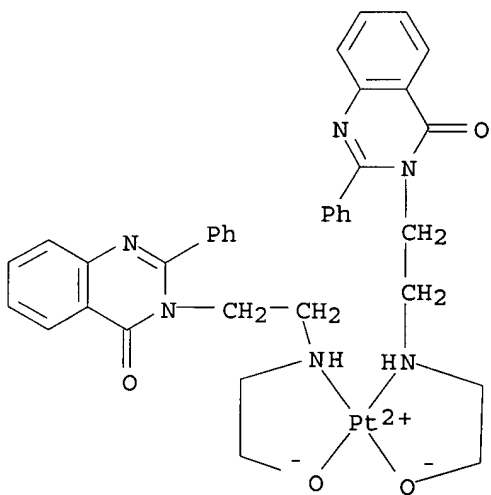
RN 146913-23-7 CAPLUS

CN Platinum, bis[3-[2-[(2-hydroxyethyl)amino]ethyl]-2-methyl-4(3H)-quinazolinonato-NN3,O3]- (9CI) (CA INDEX NAME)



RN 146913-24-8 CAPLUS

CN Platinum, bis[3-[2-[(2-hydroxyethyl)amino]ethyl]-2-phenyl-4(3H)-quinazolinonato-NN3,03]- (9CI) (CA INDEX NAME)



L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:38576 CAPLUS

DOCUMENT NUMBER: 102:38576

TITLE: Synthesis of aminoalcohol compounds of platinum and crystal structure of trans-[dichlorobis(2-amino-2-methyl-1-propanol)platinum]

AUTHOR(S): Rochon, F. D.; Kong, P. C.; Melanson, R.

CORPORATE SOURCE: Dep. Chim., Univ. Quebec, Montreal, QC, H3C 3P8, Can.

SOURCE: Canadian Journal of Chemistry (1984), 62(12), 2657-60  
CODEN: CJCHAG; ISSN: 0008-4042

DOCUMENT TYPE: Journal

LANGUAGE: English

AB trans-[Pt(LH)2Cl2], PtL2, and Pt(LH)2(SR)2 (RSH = PhSH, thiouracil, HL = NH2C(CH3)2CH2OH, and NH2C(CH2OH)3) were prepared. The crystal structure of trans-[Pt(NH2C(CH3)2CH2OH)2Cl2] was determined by x-ray diffraction methods. The crystals are monoclinic, space group P21/c, with a 6.282(3), b

10/786,924

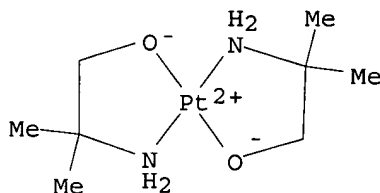
20.901(13),  $c$  10.769(10) Å,  $\beta$  92.64(6)°, and  $Z = 4$ . The structure was refined by full-matrix least-squares anal. of a conventional R factor of 0.04. and  $R_w = 0.042$ . The coordination around the Pt atom is square planar. The Pt-Cl distances are 2.306(2) and 2.309(3) Å and the Pt-N bonds are 2.060(8) and 2.071(7) Å. The hydroxyl O atoms are disordered; the disorder is different for each organic ligand. The structure is stabilized by an extensive H bonding system.

IT 93833-54-6P 93921-65-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and reactions with thiols or hydrochloric acid)

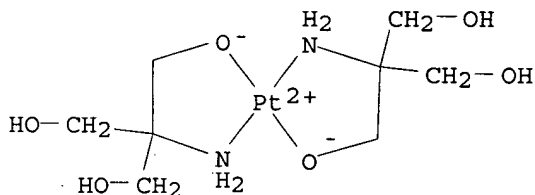
RN 93833-54-6 CAPLUS

CN Platinum, bis(2-amino-2-methyl-1-propanolato-N,O)-, (SP-4-1)- (9CI) (CA INDEX NAME)



RN 93921-65-4 CAPLUS

CN Platinum, bis[2-amino-2-(hydroxymethyl)-1,3-propanediolato-N,O]-, (SP-4-1)- (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:446287 CAPLUS

DOCUMENT NUMBER: 99:46287

TITLE: X-ray crystal and molecular structure of cis(N,N'),trans(O,O')-bis-(2-aminoethanolato)-cis-dichloroplatinum(IV) dihydrate. The relationship of antitumor activity to ring closure

AUTHOR(S): Kuroda, Reiko; Neidle, Stephen; Ismail, Ismail M.; Sadler, Peter J.

CORPORATE SOURCE: Dep. Biophys., King's Coll., London, WC2B 5RL, UK

SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1983), (4), 823-5  
CODEN: JCDTBI; ISSN: 0300-9246

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The crystal and mol. structures of the title compound were determined by x-ray diffractometry using the heavy-atom method and refined by least squares to  $R = 0.036$  for 2051 unique observed reflections. The crystals were triclinic, space group  $P_{21}2121$ , with  $a$  7.097(2),  $b$  9.060(1),  $c$  10.306(2) Å,  $\alpha$  116.02(1),  $\beta$  101.63(2),  $\gamma$  69.21(1)°, and  $d_c = 2.522$  for  $Z = 2$ . The complex was also characterized by  $^1H$  and  $^{195}Pt$  NMR spectroscopy and shown to have a closely octahedral arrangement around Pt(IV) with bidentate  $NH_2(CH_2)_2O^-$  rather than unidentate  $NH_2(CH_2)_2OH$  ligands. This finding was discussed in relation to the unusually low

10/786,924

antitumor activity of the complex.

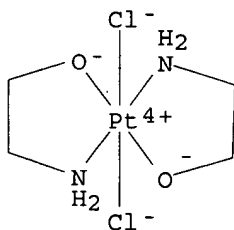
IT 86391-45-9

RL: PRP (Properties)

(crystal structure and NMR spectra of)

RN 86391-45-9 CAPLUS

CN Platinum, bis(2-aminoethanolato-N,O)chloro-, dihydrate, (OC-6-33)- (9CI)  
(CA INDEX NAME)



● 2 H<sub>2</sub>O

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:60582 CAPLUS

DOCUMENT NUMBER: 98:60582

TITLE: Study of the kinetics of cyclization of  
tris(hydroxymethyl)aminomethane coordinated in a  
platinum(II) sphere

AUTHOR(S): Stetsenko, A. I.; Shigina, L. I.; Mokhov, A. I.;  
Tikhonova, L. S.

CORPORATE SOURCE: Leningr. Khim. Farm. Inst., Leningrad, USSR

SOURCE: Zhurnal Neorganicheskoi Khimii (1982), 27(11), 2834-8  
CODEN: ZNOKAQ; ISSN: 0044-457X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The kinetics of the substitution reactions  $\text{PtL}_2\text{Cl}_2 + \text{OH}^- \rightarrow$   
 $\text{PtL}(\text{LH})\text{Cl} + \text{Cl}^- + \text{H}_2\text{O}$  and  $\text{PtL}(\text{LH})\text{Cl} + \text{OH}^- \rightarrow \text{Pt}(\text{LH})_2 + \text{Cl}^- + \text{H}_2\text{O}$  (L  
= tris(hydroxymethyl)aminomethane and LH =  $\text{NH}_2\text{C}(\text{CH}_2\text{OH})_2\text{CH}_2\text{O}$ ) were studied,  
where L transforms from monodentate to bidentate LH. The 1st reaction is  
much faster than the 2nd. The 2nd reaction is pseudo-1st-order with  
activation energy 57 kJ/mol and entropy -92.9 J/mol-degree. The rate  
const. are independent of the ionic strength and  $\text{Cl}^-$  concentration and  
increase

linearly as the  $\text{OH}^-$  concentration increases. Possible mechanisms are  
discussed.

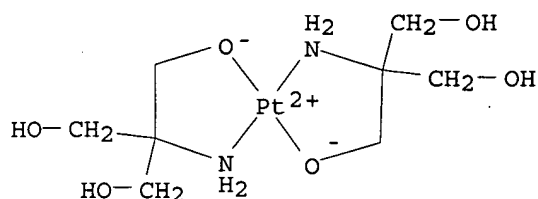
IT 77319-96-1

RL: PRP (Properties)

(IR spectra of, from reaction of platinum chloro complex with tris  
hydroxymethylaminomethane with hydroxide ion)

RN 77319-96-1 CAPLUS

CN Platinum, bis[2-amino-2-(hydroxymethyl)-1,3-propanediolato-N,O]- (9CI)  
(CA INDEX NAME)



L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1982:25197 CAPLUS  
 DOCUMENT NUMBER: 96:25197  
 TITLE: Cyclization in complexes of platinum(II) with tris(hydroxymethyl)aminomethane  
 AUTHOR(S): Stetsenko, A. I.; Shigina, L. I.; Tikhonova, L. S.; Shirai, M. V.  
 CORPORATE SOURCE: Khim.-Farm. Inst., Leningrad, USSR  
 SOURCE: Zhurnal Neorganicheskoi Khimii (1981), 26(11), 3145-8  
 CODEN: ZNOKAQ; ISSN: 0044-457X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

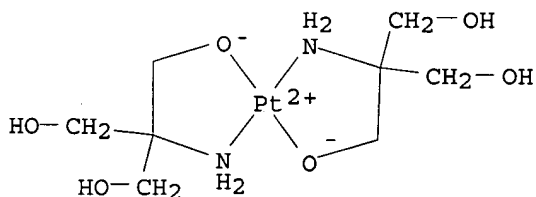
AB Bases with  $pK_b > 8$  cause trans-PtL<sub>2</sub>Cl<sub>2</sub> (L = title ligand) to form the bis chelate PtL'<sub>2</sub> (L' = deprotonated L) ion which Pt(II) coordinates to N and O atoms. In the presence of weaker bases (pyridine, 2-aminopyrimidine) cyclization is difficult and nucleophilic displacement by Cl<sup>-</sup> can occur. Mixed complexes such as [Pt(NH<sub>3</sub>)<sub>2</sub>L<sub>2</sub>]Cl<sub>2</sub> and [Pt(NH<sub>3</sub>)<sub>2</sub>LC]Cl can be obtained by reaction of L with trans-[Pt(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>]. Cyclization apparently involves acid dissociation of ligand OH and Cl<sup>-</sup> aquation, followed by a deaquation by ligand alkoxide.

IT 77319-96-1P

RL: PREP (Preparation)  
 (preparation of)

RN 77319-96-1 CAPLUS

CN Platinum, bis[2-amino-2-(hydroxymethyl)-1,3-propanediolato-N,O]- (9CI)  
 (CA INDEX NAME)



L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1981:184763 CAPLUS  
 DOCUMENT NUMBER: 94:184763  
 TITLE: Complexes of platinum(II) with tris(hydroxymethyl)aminomethane (NH<sub>2</sub>C(CH<sub>2</sub>OH)<sub>3</sub>(HL))  
 AUTHOR(S): Stetsenko, A. I.; Shigina, L. I.; Tikhonova, L. S.  
 CORPORATE SOURCE: USSR  
 SOURCE: Zhurnal Neorganicheskoi Khimii (1981), 26(3), 690-5  
 CODEN: ZNOKAQ; ISSN: 0044-457X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

AB trans-Pt(HL)<sub>2</sub>Cl<sub>2</sub> [HL = NH<sub>2</sub>C(CH<sub>2</sub>OH)<sub>3</sub>] was prepared by reaction of Na<sub>2</sub>[PtCl<sub>4</sub>] with HL in aqueous NaClO<sub>4</sub> solution. The addition of aqueous NaOH to Pt(HL)<sub>2</sub>Cl<sub>2</sub> in 2:1

10/786,924

and 1:1 OH:Pt ratios gave PtL2 and PtL(HL)Cl, resp. Potentiometric data indicate that in alkaline solution Pt(HL)2Cl2 first forms stable PtL(HL)Cl, then

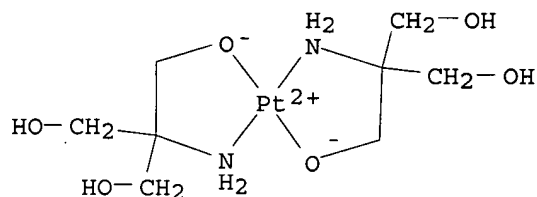
PtL2.

IT 77319-96-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 77319-96-1 CAPLUS

CN Platinum, bis[2-amino-2-(hydroxymethyl)-1,3-propanediolato-N,O]- (9CI)  
(CA INDEX NAME)



L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1976:486517 CAPLUS

DOCUMENT NUMBER: 85:86517

TITLE: Disproportionation of chloride-iodide ethanolamine complexes of platinum(II) in an acid medium

AUTHOR(S): Kukushkin, Yu. N.; Lobantsova, V. F.; Ukraintsev, V. B.; Mokhov, A. I.

CORPORATE SOURCE: Leningr. Tekhnol. Inst. im. Lensovet, Leningrad, USSR

SOURCE: Zhurnal Neorganicheskoi Khimii (1976), 21(6), 1683-6

CODEN: ZNOKAQ; ISSN: 0044-457X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The reaction of trans-PtL(HL)I (HL = HOCH2CH2NH2) with chloride ion in strong acid solution was studied; after rapid opening of the ethanolamine cycle, disproportionation occurs: trans-Pt(HL)2ICl .dblharw. trans-Pt(HL)2I2 + trans-Pt(HL)2Cl2. Trans-PtL(HL)Cl reacts with iodide ion in acid solution according to the same equilibrium At a Pt:I-:Cl- molar ratio

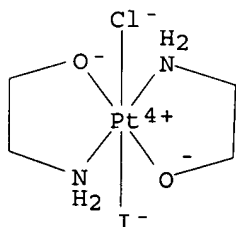
of 1:1:1 25% of the complex is in the form of trans-Pt(HL)2I2 and 25% in the form of trans-Pt(HL)2Cl2.

IT 60219-23-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(disproportionation reaction of)

RN 60219-23-0 CAPLUS

CN Platinum, bis(2-aminoethanolato-N,O)chloriodo- (9CI) (CA INDEX NAME)



IT 60185-32-2P 60185-33-3P

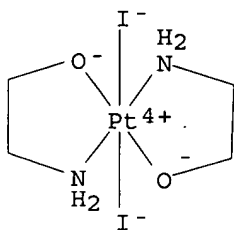
RL: PREP (Preparation)

(from disproportionation reaction of chlorobis(ethanolamine)iodoplatinum)

10/786,924

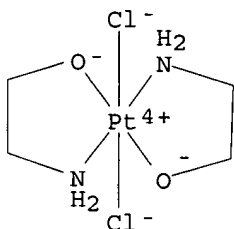
RN 60185-32-2 CAPLUS

CN Platinum, bis(2-aminoethanolato-N,O)diiodo- (9CI) (CA INDEX NAME)



RN 60185-33-3 CAPLUS

CN Platinum, bis(2-aminoethanolato-N,O)dichloro- (9CI) (CA INDEX NAME)



L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1975:7946 CAPLUS

DOCUMENT NUMBER: 82:7946

TITLE: Kinetics and mechanism of the breaking of ethanolamine rings in platinum(II) complexes

AUTHOR(S): Kukushkin, Yu. N.; Ukraintsev, V. B.; Mokhov, A. I.

CORPORATE SOURCE: Leningr. Tekhnol. Inst. im. Lensoveta, Leningrad, USSR

SOURCE: Zhurnal Neorganicheskoi Khimii (1974), 19(7), 1884-8

CODEN: ZNOKAQ; ISSN: 0044-457X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The kinetics of the interaction of cis- and trans-Pt(Etm)<sub>2</sub> and trans-PtNH<sub>3</sub>Cl(Etm) (Etm = NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O-) with the chloride ion in acid buffered solns. were studied. The rate of the reaction is proportional to [H<sup>+</sup>] at pH 5.3-5.98, nonlinearly dependent on [H<sup>+</sup>] at pH 3.95-4.97, and independent of [H<sup>+</sup>] at pH <2. At constant values of the pH, the rate of the reaction is described by the equation  $V = \{k_1 + k_2[Cl^-]\}[Pt]$ . A mechanism of the Etm ring rupture reactions is proposed, which includes a preliminary protonization of the initial cyclic compound with subsequent parallel steps of introduction of Cl<sup>-</sup> and H<sub>2</sub>O. In both the closing and the rupture of the ethanolamine rings, the dependence of the rate of the reaction on the pH of the medium is due to the establishment of a preliminary acid-base equilibrium

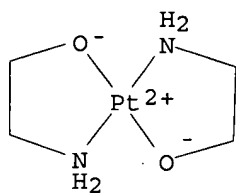
IT 53195-42-9 53228-35-6

RL: RCT (Reactant); RACT (Reactant or reagent)  
(ring opening of, in chloride aqueous acid solns.)

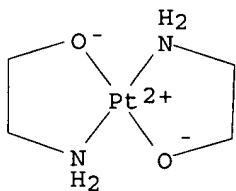
RN 53195-42-9 CAPLUS

CN Platinum, bis[2-(amino-κN)ethanolato-κO]-, (SP-4-2)- (9CI)  
(CA INDEX NAME)

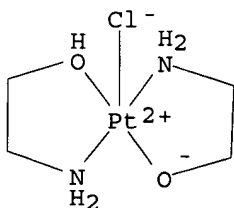
10/786,924



RN 53228-35-6 CAPLUS  
CN Platinum, bis(2-aminoethanolato-N,O)-, (SP-4-1)- (9CI) (CA INDEX NAME)



L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1966:101004 CAPLUS  
DOCUMENT NUMBER: 64:101004  
ORIGINAL REFERENCE NO.: 64:18944e-f  
TITLE: Anchimeric assistance in reactions of Pt(II) complexes  
AUTHOR(S): Basolo, Fred; Stephen, Keith H.  
CORPORATE SOURCE: Northwestern Univ., Evanston, IL  
SOURCE: Inorg. Nucl. Chem. Letters (1966), 2(1), 23-8  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB Treatment of trans-(HOC2H4NH2)2PtCl2 with OH- gives I. The rate of reaction obeys the equation  $k_{obs} = k_1 + k_2(OH^-)$ . Mechanistic considerations suggest considerable anchimeric assistance by the chelating HOCH2CH2NH2 group.  
IT 92273-56-8, Platinum, chloro(2-aminoethanolato)(2-aminoethanol)- (formation in trans-dichlorobis(2-aminoethanol)platinum reaction with hydroxyl ion, anchimeric assistance and)  
RN 92273-56-8 CAPLUS  
CN Platinum, chloro(2-aminoethanolato)(2-aminoethanol)- (7CI) (CA INDEX NAME)

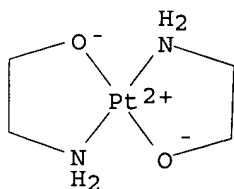


L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1962:65435 CAPLUS  
DOCUMENT NUMBER: 56:65435  
ORIGINAL REFERENCE NO.: 56:12524b-e  
TITLE: Formation of complex compounds with ring-forming



10/786,924

substituents  
AUTHOR(S): Gil'dengershel, Kh. I.  
SOURCE: Doklady Akademii Nauk SSSR (1961), 138, 369-72  
CODEN: DANKAS; ISSN: 0002-3264  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB In the reaction of a compound  $[Pt(A1)2X2]$ , where A1 is an amine which can occupy two coordination positions by virtue of ring formation, with an amine A2, the products are of type  $[Pt(A1')2]$  or  $[Pt(A1)2(A2)2]X2$ , depending on whether the rate of ring formation is greater or less than the rate of introduction of the amine A2, A1' represents (A1-H). Thus,  $trans-[Pt(DEA)2Cl2] + NH3$  gives  $[Pt(DEA')2]$ , (DEA = diethanolamine), but  $trans-[Pt(Gl)2Cl2] + NH3$  gives  $[Pt(Gl)2(NH3)2]Cl2$  (Gl = glycine). Similarly,  $trans-[Pt(MEA)2Cl2]$  (MEA = monoethanolamine) reacts with  $NH3$ , MEA, and DEA to give  $[Pt(MEA)2(NH3)2]Cl2$ ,  $[Pt(MEA)4]Cl2$ , and  $[Pt(MEA')2]$ , resp., and  $[Pt(Gl)2Cl2]$  gives, resp.,  $[Pt(Gl)2(NH3)2]Cl2$ ,  $[Pt(Gl)2(MEA)2]Cl2$ , and  $[Pt(Gl')2]$ . Thus, the rates of introduction of  $NH3$  and MEA into a complex are greater than the rate of introduction of DEA; and the ring formation is greater with  $HN(CH2CH2OH)2$  than with glycine. When  $K2PtCl4$  reacts with excess  $H2NCH2CH2OH$  and  $HN(CH2CH2OH)2$  the products are  $[Pt(MEA)4]Cl2$  and  $[Pt(DEA')2]$ , resp.; and  $[Pt(DEA)2Cl2]$  with ethylenediamine gives  $[Pt(DEA')2]$ . Acidification of solns. of the complexes  $[Pt(A')2]$  with HCl gives  $[Pt(A)2Cl2]$ . The above processes depend on the pH; thus, with excess glycine,  $[Pt(NH3Cl)2]$  gives  $[Pt(Gl')(NH3)2]Cl$  in acid medium and  $[Pt(NH3Gl')2]$  in alkaline medium.  
IT 92344-34-8P, Platinum, bis(2-aminoethanolato)-  
RL: PREP (Preparation)  
(formation of)  
RN 92344-34-8 CAPLUS  
CN Platinum, bis(2-aminoethanolato)- (7CI) (CA INDEX NAME)



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FILE 'REGISTRY' ENTERED AT 09:52:06 ON 06 DEC 2006

L1 STRUCTURE UPLOADED

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L3 28 S L1 FULL

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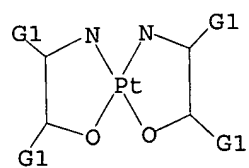
L4 15 S L3

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L1 HAS NO ANSWERS

L1 STR

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G1 H, S, P, OH, COOH, X, Cy, Ak

Structure attributes must be viewed using STN Express query preparation.

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